

Work Order ID 108563

October-21-13 10:09:04 AM

649.5310

B108563

\*108563\*

Page 1

Item ID: 649.5310

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Lower Deflector

Start Date: 10/21/13 Start Qty: 8.00

\*8\*

Cust Item ID:

Required Date: 11/04/13 Req'd Qty: 8.00

\*8\*

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 13-10-21 Tooling:

Date:

Run Start \*NR1\*

QC: Date: SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

649.5300

C

100

0.00

\*100\*

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 18.000"

\*\*\* ONE BLANK MAKES TWO PARTS\*\*\*

110

0.00

\*110\*

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine per folio FB213

DWG REV: CFOLIO REV: AA

2- deburr and break all sharp edges

8

SL13-11-6

# Work Order ID 108563

October-21-13 10:09:04 AM

**\*108563\***

Page 2

Item ID: 649.5310

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Lower Deflector

Start Date: 10/21/13 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 11/04/13 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
<b>*120*</b>									
QC	Memo	0.00				8	15		LB-11-6
Quality Control									
130	QC8- Inspect parts - second check	0.00							
<b>*130*</b>									
QC	Memo	0.00				8	1		
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
<b>*140*</b>									
Outsource4	Memo	0.00							
Outsource process - Anodize	Issue P/O to ATG : <u>22026</u>								
	1- Black Anodize as per Dwg 649.5300								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Comformity is required								



10-10-10

10-10-10

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10-10-10

**Work Order ID 108563**

October-21-13 10:09:04 AM

**\*108563\***

Page 4

Item ID: 649.5310

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Lower Deflector

Stop **\*NS2\***

Start Date: 10/21/13 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 11/04/13 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

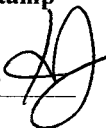
**\*190\***

QC

Memo

0.00

Quality Control

13/11/22 

13-11-21



# Picklist Print

October-21-13 10:09:08 AM

Page 1

Work Order ID: 108563

\*108563\*

Parent Item: 649.5310

\*649 5310\*

Parent Item Name: Lower Deflector

Start Date: 10/21/13

Required Date: 11/04/13

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV. A NEW ISSUE JFS 13/09/27 VERIFY BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B0.375X6.000		Purchased	No				f	16.0000		7			
<b>*M7075T6B0 375X6 000*</b>									**				
7075-T6 BAR 0.375" X 6.000"													
				<u>Location</u>				<u>Loc Qty</u>					
				MAT049				16					
				123611				16					
										<u>10.02 fc</u>			

DK/B. a  
13/11/01



# APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 04057

SHEET 1 OF 1

DWG NO. 649.5300

REV: B

PREPARED  
BY

D. PETERS

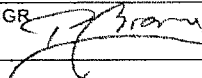
DATE: 08/13/13

EFFECT ON DWG  
☒ INC. ☐ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY:

ENGR



MFG



QC



EFF:

NEXT ORDER

TRANSACTION CODES (TC):

A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: MARKED INSPECTION DIMENSIONS

ECR:

NONE

108563 MLJ  
13-10-21

DOCUMENTS EFFECTED:

☐ RFMS ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ BOM

CHANGE CATEGORY  
☐ MAJOR ☒ MINOR

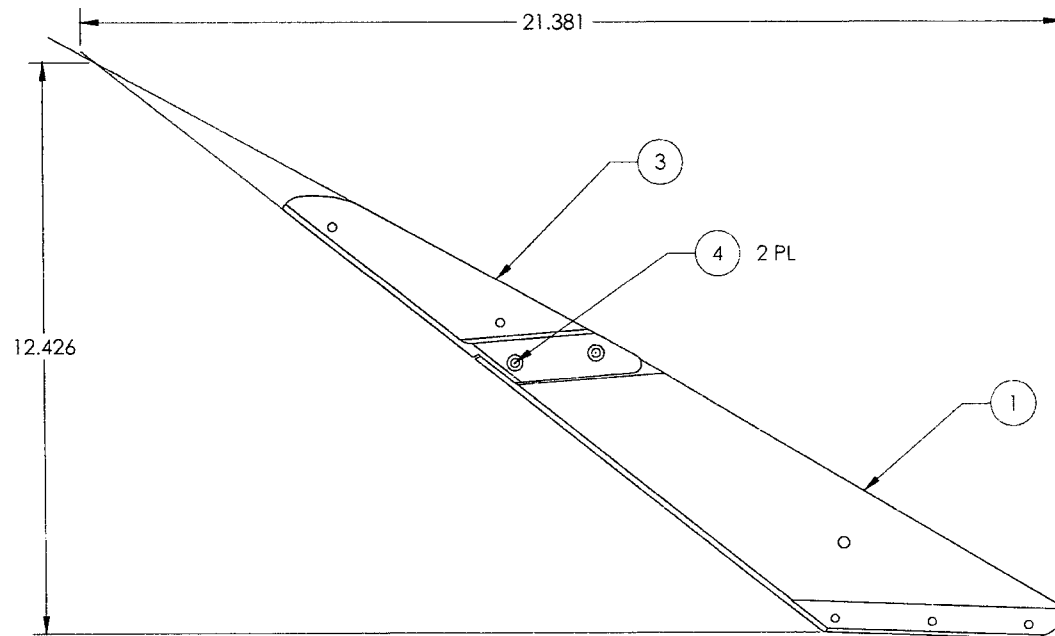
DER REVIEW REQUIRED  
☐ YES ☒ NO



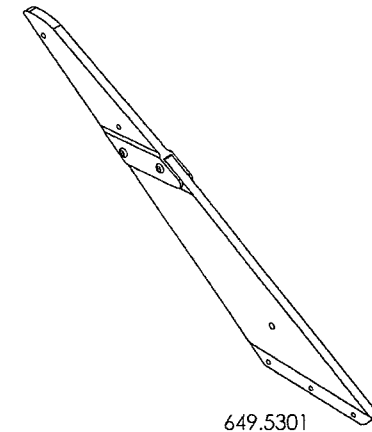
108563

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE (AQ MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;  
PRE TREAT PRC-DESOTO PR-148 ADHESION PROMOTER;  
PRIMER IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 3 DEBURR AND BREAK ALL SHARP EDGES
- 4 IDENTIFY IAW MPP-120
- 5 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 & 3 UPON ASSY



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PB1		
N/C	INITIAL RELEASE	12/06/11	P. BRAVO
A	INCORPORATED ECHN 0341, 0342 AND 0345	04/16/12	P. BRAVO
B	INCORPORATED ECHN 03523	05/22/12	P. BRAVO
C	INCORPORATED ECHN 0357	08/13/12	P. BRAVO



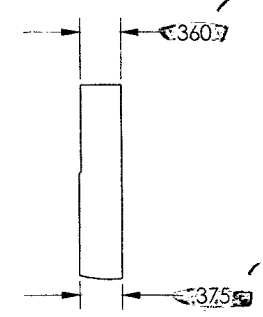
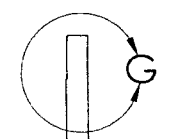
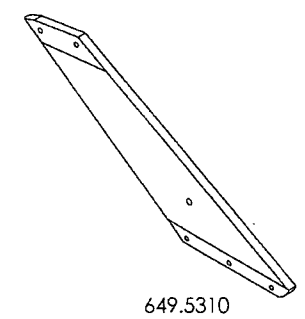
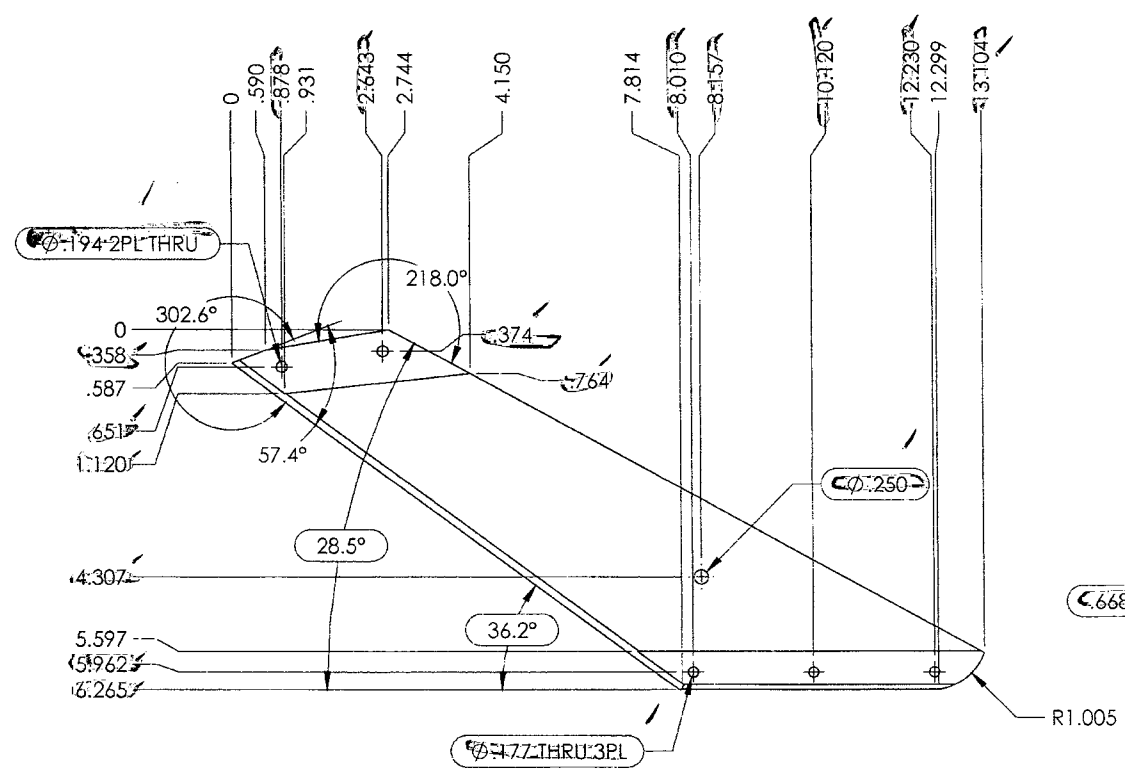
A/R	5	601.2045	RTV, LOCTITE 598		△
2	4	601.3074	RIVET	MS20470AD6-12	
1	3	649.5312	BREAKAWAY TIP		△△
	2	649.5311	UPPER DEFLECTOR		△△
1	1	649.5310	LOWER DEFLECTOR		△△
		649.5301	DEFLECTOR ASSY		
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
	QTY	PARTS LIST			
	NEXT ASSY (S)	APICAL INDUSTRIES			
	649.4900	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
		DEFLECTORS			
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .001 ANGLES ± .5°	SCALE NONE	DRG. NO. 649.5300	REV C
					SHEET 1 OF 4



108563

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A  
B  
C  
D



DETAIL G

ORIGINAL DATE: 12-01-11		APICAL INDUSTRIES	
DRAWN BY: A. OLAMI	CHECKED BY: P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
IN-PROCESS APPROVAL		DEFLECTORS	
DATE: 11-11-11			
COMPARISON:			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DIMENSIONS ± .03 3 PLACE DIMENSIONS ± .010 ANGLES ± .5°		SHEET: 07/26	DWG. NO.: 649.5300
		SCALE: NONE	SHEET: 2 OF 4

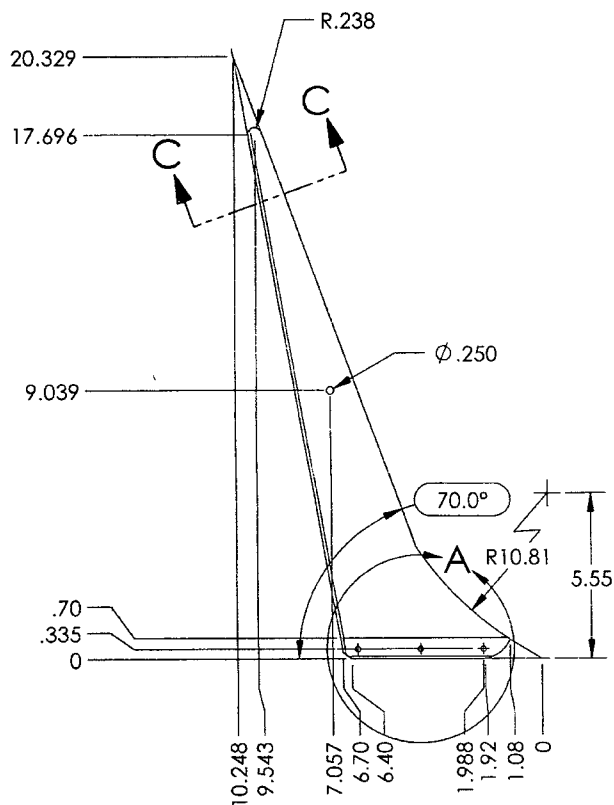


108563

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.13 X 45° 2PL

# SECTION C-C



Ø .177 THRU 3 PL

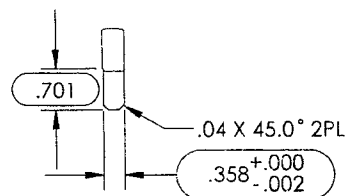
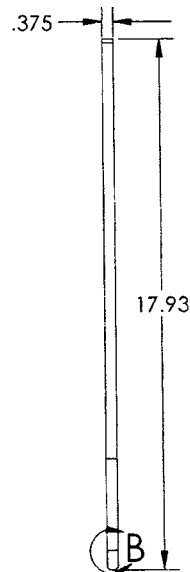
.30 X 23.0°

R1.100

2.109±.002

4.219±.002

## DETAIL A



## DETAIL B

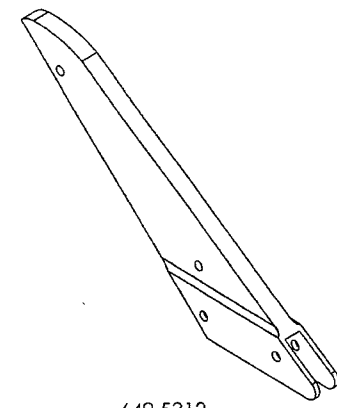
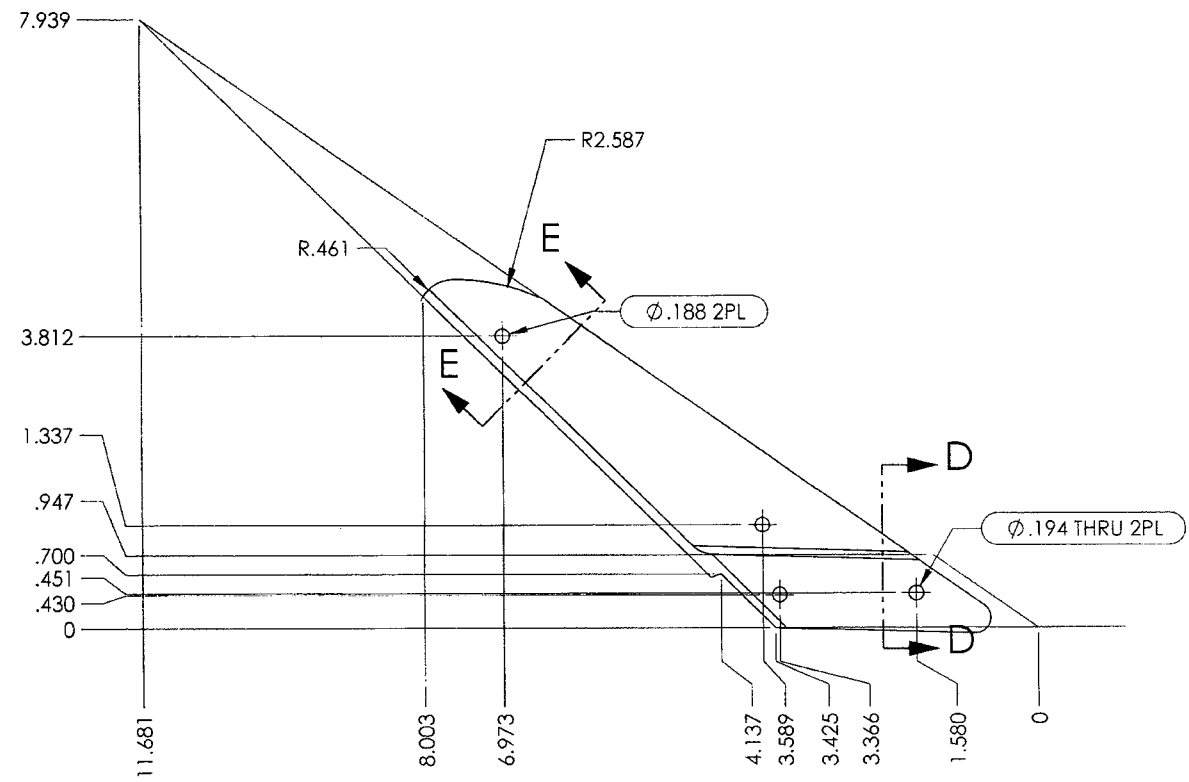
649.5311

ORIGINAL DATE 10-06-11 DRAWN BY A. QUAN CHECKED BY P. BRAYCO DRAWING APPROVAL P. BRAYCO 12-06-11 CONTRACT NO.		<b>APICAL INDUSTRIES</b> 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.010 2 PLACE DECIMALS ±.005 3 PLACE DECIMALS ±.002 ANGLES ±.5°		SHEET B	DWG. NO. 649.5300 REV. C
SCALE NONE		SHEET 3 OF 4	

1085763

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.13 X 45.0° 2PL  
SECTION E-E



649.5312

SECTION D-D

Cross-section D-D of the deflector assembly. It shows the internal structure and dimensions of the deflector plates. Key dimensions include:
 

- Vertical dimensions: .38, .58, .375<sup>+0.002</sup>/<sub>-.000</sub>.
- Material callouts: R.00 2PL.

ORIGINAL DATE 12/20/11		APICAL INDUSTRIES	
DESIGNED BY A. CLARK		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
CHECKED BY P. BRAY		DEFLECTORS	
DATE 12/20/11		REV C	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE TO 3 PLACES FRACTIONS ARE TO 16THS HOLE DIA. TO .001		SCALE NONE	SHEET 4 OF 4

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 108563
<b>Description:</b> lower deflector		<b>Part Number:</b> 649.5310
<b>Inspection Dwg:</b> 649.5300 Rev: C		<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
360	+ - .010	358	/		Vern	SL-10
375	+ - .010	390	/	stock	-	
668	+ - .010	668	/		-	
100x45°	+ - .010	103x45°	/		-	
358	+ .002 - .000	358.5	/		mic	SL-4
Ø.194	+ .005 - .001	.194	/		Vern	
Ø.177	+ .005 - .001	.178	-		-	
Ø.250	+ .005 - .001	.250	-		-	
374	+ - .010	375	/		H-G	
651	+ - .010	653	/		-	
358	+ - .010	357	/		-	
1.120	+ - .010	1.119	/			
764	+ - .010	765	/			
4.307	+ - .010	4.307	/			
5.962	+ - .010	5.962	/			
6.265	+ - .010	6.266	/			
13.104	+ - .010	13.095	/			
12.230	+ - .010	12.235	/			
10.120	+ - .010	10.126	/			
8.157	+ - .010	8.163	/			
8.010	+ - .010	8.017	/			
2.643	+ - .010	2.650	/			
878	+ - .010	885	/			

<b>Measured by:</b> SL	<b>Audited by:</b> <i>cmf</i>	<b>Preliminary Approval:</b>
<b>Date:</b> 13-11-06	<b>Date:</b> 13/11/06	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

*10.04.15*







A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

### Pack List

Number: 62747

Date: 19-Nov-13

#### To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

#### Ship To


DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity		Description	
1 lot	Part: ASST	Rev:	
10 PCS 646.3912 (5.90)			
4 PCS 646.3810 (6.55)			
8 PCS 649.5310 (12.65)			
HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2			
PRIME MIL-P-23377J TYPE I CLASS N			
PRICE IS PER PIECE			
Job: 20130715		PO: 22026	Line:
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			
DATE: 19/11/13			
CERTIFIED SIGNATURE: 			
RECEIVER SIGNATURE: _____			

